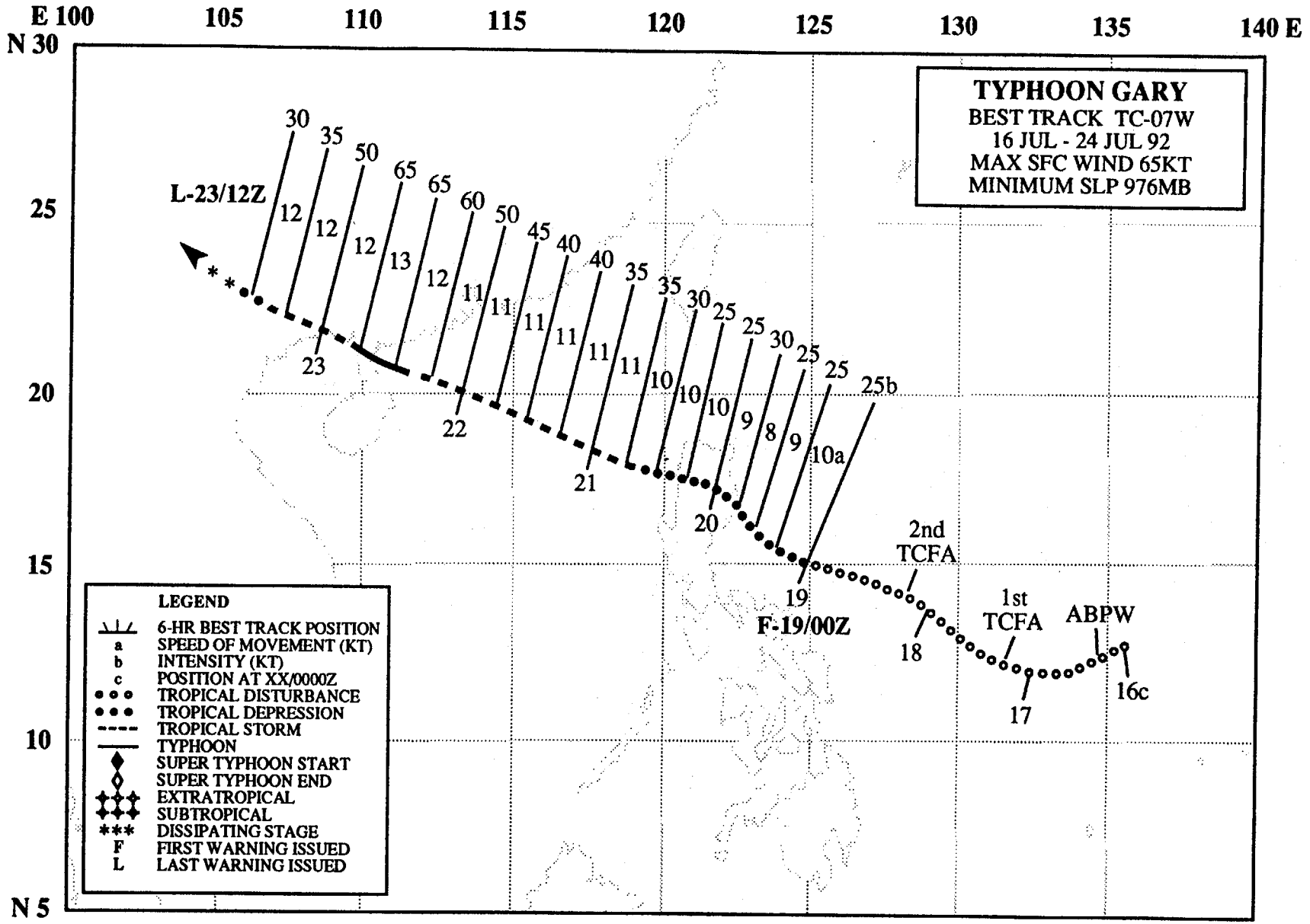
E 100
105
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TYPHOON GARY
BEST TRACK TC-07W
16 JUL - 24 JUL 92
MAX SFC WIND 65KT
MINIMUM SLP 976MB
L-23/12Z
F-19/00Z
2nd TCFA
1st TCFA
ABPW
LEGEND
6-HR BEST TRACK POSITION
a SPEED OF MOVEMENT (KT)
b INTENSITY (KT)
c POSITION AT XX/0000Z
TROPICAL DISTURBANCE
TROPICAL DEPRESSION
TROPICAL STORM
TYPHOON
SUPER TYPHOON START
SUPER TYPHOON END
EXTRATROPICAL
SUBTROPICAL
*** DISSIPATING STAGE
F FIRST WARNING ISSUED
L LAST WARNING ISSUED

TYPHOON GARY (07W)

I. HIGHLIGHTS

Gary was the last of three consecutive tropical cyclones to cross northern Luzon and intensify in the South China Sea during July. After early difficulties locating the low-level vortex, JTWC correctly predicted that the tropical cyclone would strike the southern coast of China near Hainan Dao. Gary caused widespread damage across southern China.

II. TRACK AND INTENSITY

Typhoon Gary's track paralleled those of Typhoon Eli (05W) and Tropical Storm Faye (06W). The genesis mechanism for all three was an active monsoon trough, which extended across the Philippine Sea. On 16 July, mention of an area of vigorous convection was included on the daily Significant Tropical Weather Advisory. Within 24 hours, its organization had improved sufficiently to warrant a Tropical Cyclone Formation Alert, which was issued at 170630Z. The Alert was reissued at 180630Z after the broad low-level circulation, containing multiple vortices, failed to consolidate in the presence of increased upper-level shear. At 190000Z, convective organization had improved to the point that the first warning on Tropical Depression 07W was issued. Because the circulation was large and poorly organized, there were large differences in the satellite fix positions as satellite analysts at network sites attempted to pinpoint the location of the low-level circulation center. The cloud system consolidated and became easier to locate by satellite once it crossed the northern Philippines. After being upgraded to tropical storm intensity at 201800Z, Gary tracked west-northwestward across the South China Sea, and later over the Leizhou Peninsula to the north of Hainan Dao. Shortly before landfall, Gary developed a large, ragged eye (Figure 3-07-1), which prompted its upgrade to typhoon intensity at 221200Z. After reaching an estimated peak intensity of 65 kt (33 m/sec), the typhoon made landfall and dissipated. Ship reports near Hainan Dao indicated that winds in excess of 30 kt (15 m/sec) persisted overwater until after the cyclone center was well inland, which necessitated additional tropical cyclone warnings until 231200Z.

III. FORECAST PERFORMANCE

JTWC's track forecasts improved significantly after the low-level circulation center consolidated on 20 July. Initial position errors fell in the 25 nm (45 km) range in contrast to those a day earlier on 19 July, which were in the 125 nm (230 km) range. Early on, JTWC correctly predicted Gary's west-northwestward track across the South China Sea, just as Eli (05W) and Faye (06W) had done less than two weeks earlier.

IV. IMPACT

News reports indicated that Typhoon Gary's passage over southern China resulted in the deaths of 26 people, and injuries to another 63. The southern provinces of Guangdong and Guangxi suffered extensive flood and wind damage with losses estimated at $148 million (US).

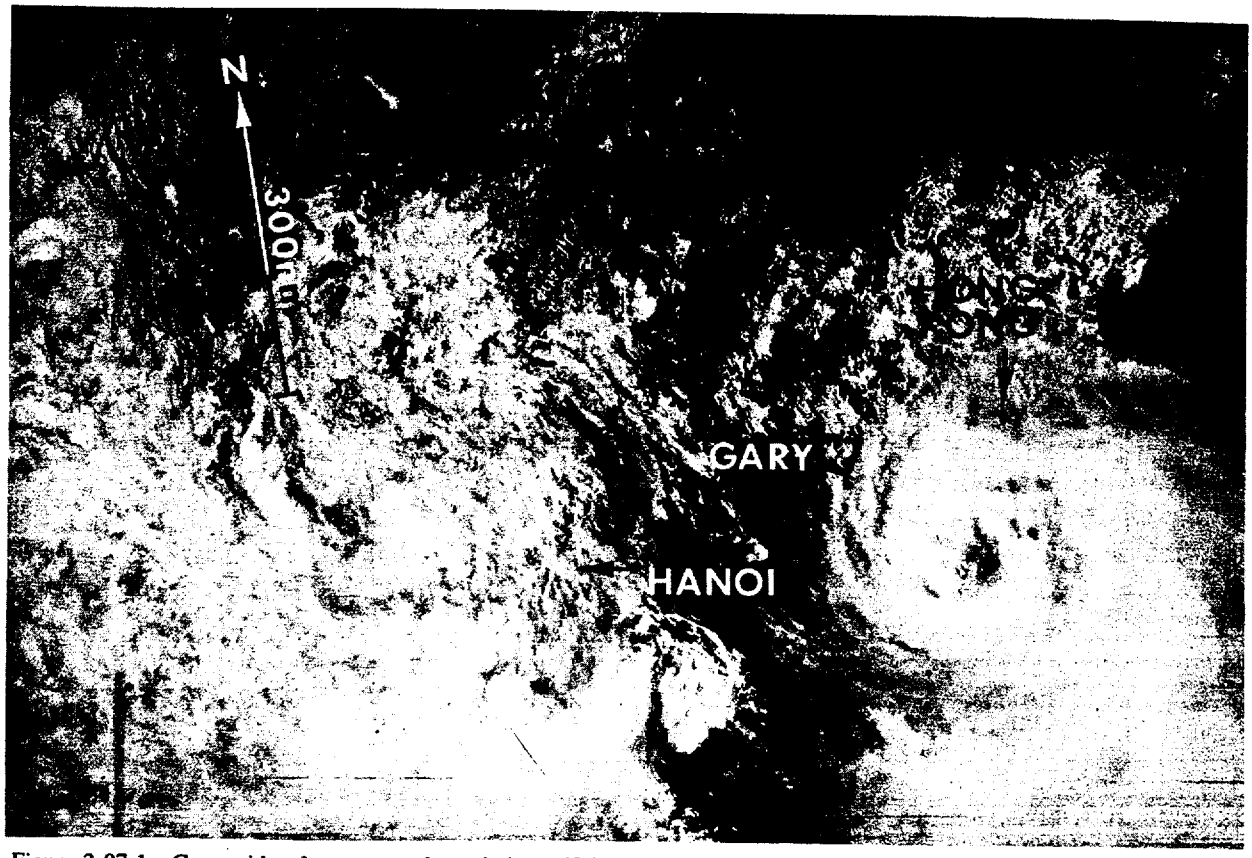

Figure 3-07-1. Gary with a large, ragged eye is intensifying as it approaches the southern coast of China (220200Z July DMSP visual imagery).